We claim:

1. A coated optical material suitable for use as an optical path material in lasers operating below 250 nm comprising:

a shaped optical monocrystal having an entry face and an exit face for laser radiation entering and exiting said crystal, and

a coating on at least the exit face of said monocrystal, said coating selected from the group consisting of SiN, MgF_2, MgF_2 doped fused silica and fluorine doped fused silica.

2. The coated optical material according to claim 1, wherein said monocrystal is of formula MF_2, wherein M is a metal selected from the group consisting of beryllium, magnesium, calcium, strontium and barium, and mixtures thereof, and F is fluorine.

3. The coated optical material according to claim 1, wherein said coating is MgF_2.

4. The coated optical material according to claim 1, wherein the thickness of the coating is in the range of 20 to 300 nm.

5. The coated optical material l according to claim 1, wherein the thickness of the coating is in the range of 20 to 150 nm.

6. The coated optical material l according to claim 1, wherein the thickness of the coating is in the range of 20 to 100 nm.

7. The coated optical material according to claim 1, wherein the coating is MgF_2 doped fused silica and the MgF_2 content of said MgF_2 doped fused silica is in the range of 0.2% to 4 % by weight.

8. The coated optical material according to claim 1, wherein the coating is fluorine doped fused silica and the fluorine content of said fluorine doped fused silica is in the range of o.2 to 4 % by weight.

9. The coated optical material according to claim 1, wherein the monocrystal is CaF2 and the coating is MgF_2.

10. The coated optical material according to claim 1, wherein the monocrystal is CaF2 and the coating is MgF_2 doped fused silica.

11. The coated optical material according to claim 1, wherein the monocrystal is CaF2 and the coating is fluorine doped fused silica.

12. A coated optical material suitable for use as an optical path material in lasers operating below 200 nm comprising:

a shaped optical monocrystal having an entry face and an exit face for laser radiation entering and exiting said crystal, and

a coating on at least the exit face of said monocrystal, said coating selected from the group consisting of inorganic materials transmissive to electromagnetic radiation below 200 nm wavelength.

13. The coated optical material according to claim 12, wherein said monocrystal is of formula MF_2, wherein M is a metal selected from the group consisting of beryllium, magnesium, calcium, strontium and barium, and mixtures thereof, and F is fluorine.

14. The coated material according to claim 12, wherein the coating is selected from the group consisting of MgF_2, MgF_2 doped fused silica and fluorine doped fused silica.

15. The coated material according to claim 13, wherein the coating is selected from the group consisting of MgF_2, MgF_2 doped fused silica and fluorine doped fused silica.

16. The coated optical material according to claim 12, wherein the thickness of the coating is in the range of 20 to 300 nm.

17. The coated optical material according to claim 12, wherein the thickness of the coating is in the range of 20 to 150 nm.

18. The coated optical material l according to claim 12, wherein the thickness of the coating is in the range of 20 to 100 nm.

19. The coated optical material according to claim 12, wherein the coating is MgF_2 doped fused silica and the MgF_2 content of said MgF_2 doped fused silica is in the range of 0.2 to 4 % by weight.

18. The coated optical material according to claim 12, wherein the coating is fluorine doped fused silica and the fluorine content of said fluorine doped fused silica is in the range of 0.2 to 4 % by weight.